

DC-8 Flight Operations



DFRC Review Process

- **Airborne Science Configuration Control Board**
 - Sept. 12 - CCR-101, SOLVE II Payload Integration, presented and approved.
 - October 23 - Meeting with Chief Engineer completed. Tech. Brief waived.
 - Nov. 21 - Hazard Review completed.
- **DFRC Flight Operations Review**
 - Dec. 12 - Flight Operational Readiness Review completed. Report pending. Approval expected.
 - Flight participant forms and safety briefs completed. Master list of approved fliers compiled. Additional submittals from field expected.

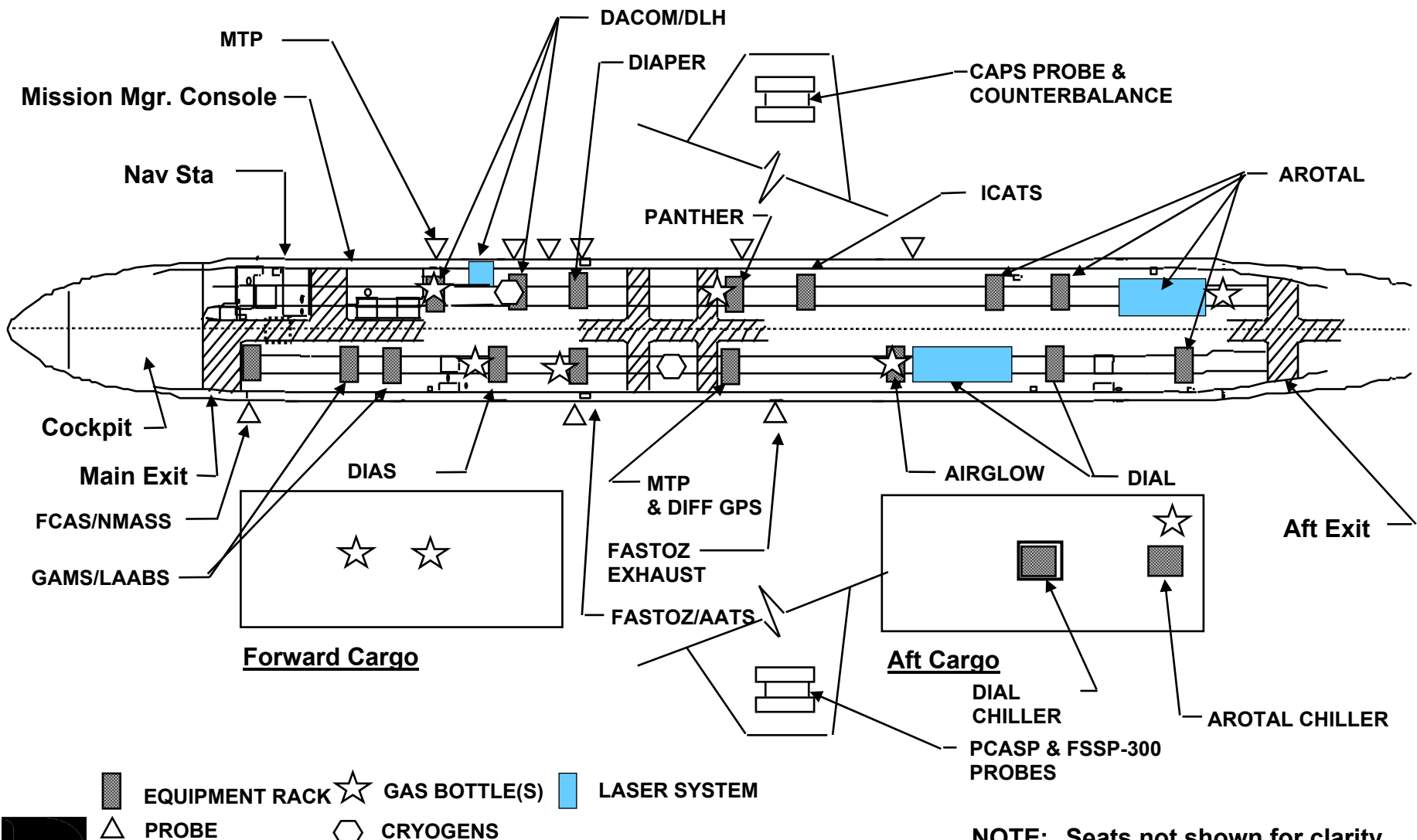


Instrument Integration

Experiment	Instrument	Principal Investigator
DIAPER DC-8 In-situ Aerosol Parameter Experiment Rack	Condensation particle counters, aerosol spectrometer probes, nephelometer, aethelometer	Bruce Anderson NASA Langley Research Center
FASTOZ High Resolution In-Situ Ozone	Nitrogen Oxide Analyzer and Probe	Melody Avery NASA Langley Research Center
DIAL Differential Absorption Lidar	UV DIAL III (Differential Absorption Lidar) Lidar investigations of Ozone and aerosols	Edward V. Browell NASA Langley Research Center
DACOM / DLH Differential Absorption CO Measurement / Diode Laser Hygrometer	Measurements of Tropospheric CO, CO ₂ , CH ₄ , N ₂ O, H ₂ O(v)	Glenn Diskin NASA Langley Research Center
PANTHER PAN and other Trace Hydrocarbons Experiment	Gas chromatograph-mass spectrometer, electron capture gas chromatographs & probe	James Elkins National Oceanic and Atmospheric Administration
MTP Microwave Temperature Profiler	Radiometer retrieves profiles of air temperature for a 20km region centered on flight altitude	Michael J. Mahoney Jet Propulsion Laboratory
AROTEL GSFC/LaRC - Aerosol, Ozone, and Temperature LIDAR	Backscatter / DIAL / Raman Lidar	Thomas McGee / John Burris NASA Goddard Space Flight Center C. A. Hostetler NASA Langley Research Center
GAMS / LAABS Gas and Aerosol Measurement Sensor & Langley Airborne A-Band Spectrometer	Solar spectrometer and high-resolution spectrometer	Michael C. Pitts NASA Langley Research Center
NCAR DIAS Direct Beam Solar Irradiance Spectroradiometer	Scanning Spectroradiometer UV and Visible Irradiance Measurements	Richard E. Shetter National Center for Atmospheric Research
FCAS/NMAS Focused Cavity Aerosol Spectrometer / Nucleation-mode Aerosol Size Spectrometer	Particle Size Distribution Measurements	Michael Reeves University of Denver
AATS-14 NASA Ames Airborne Tracking Sunphotometer	Fourteen channel tracking sunphotometer for measurements of aerosols, water vapor, and ozone.	Phillip Russell NASA Ames Research Center
Differential GPS Piggy Backer	GPS receiver updated with corrections over Iridium phone connection.	Yoaz Bar-Sever Jet Propulsion Laboratory
AirGlow Piggy Backer	InGaAs Camera to collect airglow emissions to study gravity waves.	Michael Taylor Utah State University



Instrument Integration



NOTE: Seats not shown for clarity.

Readiness

- **SOLVE II Payload**

- Integration completed 12/7.
- 12/13 & 12/17 experimenter test flights completed successfully. Minor problems noted. Ready for 12/19 test flight with all instruments participating.
- Laser calibrations for DIAL and AROTAL on-going. Ground operations since 12/9 very productive.
- No show-stoppers...

- **NASA DC-8**

- 12/10 Shakedown flight completed. No restrictions on DC-8 operating envelope.
- Kiruna fuel arrangement concluded.
- DC-8 ready to deploy.



Diplomatic Clearance Status

Country	Permit No.	Requirements	Notes
Latvia			Clearance not received to date.
U.K.			Clearance not received to date.
Poland			Clearance not received to date.
Estonia			Clearance not received to date.
Rep. of Ireland	None	File flight plan	Clearance Received.
Denmark		File Greenland request form & flight plan.	Danish form received. Must be filed NLT 8 days prior to date of transit. Will clear each flight.
Finland		Call Finnish Defense Forces for clearance each flight.	Clearance pending 24 hour notice. Will clear each flight.
Canada	None	File flight plan & pay \$100 Canadian	Clearance not received to date.
Sweden		Permission No: S03/5001	Clearance Received.
Iceland			Clearance not received to date.
Russia			Clearance not received to date.
Belarus			Clearance not received to date. Overflight not recommended.
Germany			Clearance Received.
Norway			Clearance not received to date.
Lithuania			Clearance not received to date.
Netherlands			Clearance not received to date.



Open Items

- Laser Alignments & Calibrations
12/18/02, 1/2/03 - 1/8/03
- Experimenter Test Flights
12/19/02 & 1/4
- DC-8 and C-130 Loading
1/5 - 1/6
- Diplomatic Clearances
1/7/02

